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[0025]

[Means for solving the Problems] To solve the above-mentioned problems, according to Claim 1 of the present invention, there is provided a feedback machining condition corrector to be used in a machining system which includes the machine, the machine controller, and the measuring instrument, and in which at least one standby work piece is present between the machine and the measuring instrument, the feedback machining condition corrector being characterized by including: (a) a correction value determining unit that successively obtains a difference between current and previous measured values indicative of a difference between a current value and a previous value of a measured value measured by the measuring instrument, and each time a fluctuation state of the difference between current and previous measured values exceeds a set state, determines a correction value for a machining condition for a next work piece to be machined by the machine, based on the measured value measured by the measuring instrument; and (b) a correction value supplying unit for supplying the determined correction value to the machine controller.

[0026] Note that, herein, the "correction value determining unit" may be adapted, for example, to determine a new correction value each time the leading corrected work piece undergoes measurement and when the number of accumulated measured values reaches a set

plural number, or to determine a new correction value each time the leading corrected work piece undergoes measurement and when at least one measured value is accumulated anew.

[0027] According to Claim 2 of the present invention, there is provided a feedback machining condition corrector to be used in a machining system which includes the machine, the machine controller, and the measuring instrument, and in which at least one standby work piece is present between the machine and the measuring instrument, the feedback machining condition corrector being characterized by including: (a) a correction value determining unit that successively accumulates measured values measured by the measuring instrument, and based on a plurality of accumulated measured values, determines a correction value for a machining condition for a next work piece to be machined by the machine, the correction value determining unit being adapted to successively obtain a difference between current and previous measured values indicative of a difference between a current value and a previous value of a measured value measured by the measuring instrument, shift a plurality of measured values, which are measured during a period from a time when the correction value is determined until a time when a fluctuation state of the difference between current and previous measured values thus obtained exceeds a set state, by an amount substantially the same as a value of the difference between current and previous measured values obtained

when the fluctuation state of the difference between current and previous measured values has exceeded the set state, and determine a new correction value based on the shifted measured values; and (b) a correction value supplying unit for supplying the determined correction value to the machine controller.

[0028] According to Claim 3 of the present invention, there is provided a feedback machining method including sequentially machining a plurality of work pieces by a machine, sequentially measuring by a measuring instrument the plurality of work pieces machined by the machine, the measuring instrument being arranged at a position where at least one machined workpiece is present between the machine and the measuring instrument, and correcting a machining condition for a next work piece to be machined by the machine based on measured values measured by the measuring instrument, the feedback machining method being characterized by including a correction value determining step of: successively obtaining a difference between current and previous measured values indicative of a difference between a current value and a previous value of a measured value measured by the measuring instrument; and determining a correction value for the machining condition for the next work piece to be machined by the machine based on the measured values measured by the measuring instrument, each time a fluctuation state of the difference between current and previous measured values exceeds a set state.

[0029] According to Claim 4 of the present invention, there is provided a feedback machining method including sequentially machining a plurality of work pieces by a machine, sequentially measuring by a measuring instrument the plurality of work pieces machined with the machine, the measuring instrument being arranged at a position where at least one machined work piece is present between the machine and the measuring instrument, and correcting a machining condition for a next work piece to be machined by the machine based on measured values measured by the measuring instrument, the feedback machining method being characterized by including a correction value determining step of successively accumulating the measured values measured by the measuring instrument, and based on a plurality of accumulated measured values, determining a correction value for a machining condition for a next work piece to be machined by the machine, the correction value determining step including successively obtaining a difference between current and previous measured values indicative of a difference between a current value and a previous value of a measured value measured by the measuring instrument, shifting a plurality of measured values, which are measured during a period from a time when the correction value is determined until a time when a fluctuation state of the difference between current and previous measured values thus obtained exceeds a set state, by an amount substantially the same as a value of the difference between current

and previous measured values obtained when the fluctuation state of the difference between current and previous measured values has exceeded the set state, and determining a new correction value based on the shifted measured values.